

Claims:

- 500A<sup>2</sup> X.
1. A call server for use in association with a packet network which transports calls between end systems in a public switched telephone network (PSTN), said packet network having interworking functionality to bi-directionally convert TDM signals and packets, said call server having means to centrally control functionality within said packet network and time division multiplexed (TDM) switches within the PSTN, and means to detect a mass calling event.
  2. A call server as defined in claim 1 having means to detect, in real time, a mass calling event and regulate calling activity to a dialed number for which a mass calling event has been detected.
  3. A call server as defined in claim 2 wherein said packet network is based on an Asynchronous Transfer Mode (ATM) packet protocol.
  4. A call server as defined in claim 2 wherein said packet network is based on a Frame Relay protocol.
  5. A call server as defined in claim 2 wherein said packet network is based on an IP packet protocol.
  6. A call server as defined in claim 2 having means to detect an end of a mass calling event and to cease regulation of calling activity upon detection of an end of a mass calling event.
  7. A call server as defined in claim 6 wherein said means to detect a mass calling event detects the ratio of failed call events to calls initiated to a call destination.
  8. A call server as defined in claim 2 having means to convert directory numbers to un-translated dialed numbers and to convert un-translated dialed numbers to directory numbers.
  9. A call server as defined in claim 2 having memory means for storing a directory number of a call terminator.

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10. A credit method for use in controlling telephony calls to a dialed telephone number in a detected mass calling event comprising: periodically assigning credit tokens to a bucket associated with said dialed telephone number, and blocking a call to said dialed number if there are no current credit tokens assigned to said bucket.
11. A credit method as defined in claim 10 wherein said bucket is associated with multiple dialed numbers.
12. A credit method as defined in claim 10 wherein a credit overflow threshold is provided whereby no new credit tokens are assigned to said bucket when said threshold has been reached.
13. A credit method as defined in claim 10 wherein credit tokens are assigned to said bucket in accordance with configurable and system determined parameters.
14. A credit method as defined in claim 13 wherein said configurable and system determined parameters include the time interval between assigning credit tokens to a bucket.
15. A system for use in controlling telephone calls to a dialed number in a mass calling event comprising: means to detect a mass calling event, means to assign credit tokens to said bucket on a timed basis; and means to determine whether said bucket has any current tokens.
16. A system as defined in claim 15 including means to block a call to said dialed number if no credit tokens exist in an associated credit bucket.
17. A system as defined in claim 15 wherein means to detect a mass calling event includes means to count the number of failed calls to said call destination as a function of total call attempts to said destination.
18. A system as defined in claim 15 wherein said means to assign credit tokens includes a clock to establish a rate of assigning tokens to said bucket.
19. A system as defined in claim 15 for use in a Voice over Packet (VoP) network.
20. A system as defined in claim 19 wherein said packet network is based on an asynchronous transfer mode (ATM) Voice and Telephony over ATM protocol.

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21. A system as defined in claim 19 wherein said packet network is based on a Frame Relay protocol.
22. A system as defined in claim 19 wherein said packet network is based on an IP protocol.
23. A system for controlling telephone calls through the public switched telephone network (PSTN) having a packet transport network comprising: a plurality of interworking elements to provide interworking functionality between TDM switches in the PSTN and said packet network; and a call server to provide tracking and recording functionality respecting telephone calls through said system.
24. A system as defined in claim 23 wherein said packet network is based on an Asynchronous Transfer Mode (ATM) protocol.
25. A system as defined in claim 23 wherein said packet network is based on a Frame Relay protocol.
26. A system as defined in claim 23 wherein said packet network is based on an IP protocol.
27. A system as defined in claim 23 wherein said call server includes means to detect a mass calling event and to regulate calls to a dialed number for which a mass calling event has been detected.
28. A system as defined in claim 27 wherein said call server includes means to detect the end of a mass calling event and to end regulation of calls to a dialed number upon detection of an end to a mass calling event.
29. A system as defined in claim 23 having a credit bucket mechanism for use in controlling calls to a dialed number in which a mass calling event has been detected, said credit mechanism including a timer to set an interval for issuing credit tokens to said bucket and a detector to determine if any credits are in the bucket upon receipt of a new call attempt to said dialed number.

30. A system as defined in claim 29 including means to block a call to said dialed number if there are no tokens in the associated bucket and to permit the call to continue if there is at least one token.
31. A system as defined in claim 30 including an overflow threshold unit to limit the number of tokens in said bucket to a configurable value.

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